ABSTRACT

[0052]   A method is described for optimal simultaneous design and floorplanning of integrated circuits. The method is based on formulating the problem as a geometric program, which then can be solved numerically with great efficiency. Prior work discloses the design of many different analog circuit cells such as operational amplifiers, spiral inductors, and LC oscillators which can be cast as geometric programs. The present disclosure adds to this layout floorplanning constraints in posynomial form that can be mixed with design constraints for different analog circuits. This allows the simultaneous design and floorplanning of numerous analog circuits using geometric programming. Thus, the design and floorplanning can be performed optimally in a single step.